Highlighting the U.S. Army's Chemical Demilitarization Program

Reach

Umatilla
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The End of the Beginning

The year 2003 has had a series of firsts for the U.S. Army's chemical weapons disposal program. Notable among those firsts is the closure of the U.S. Army's first full-scale chemical weapons disposal facility, the Johnston Atoll Chemical Agent Disposal System (JACADS). The closure of JACADS is the end of the beginning.

File Photograph

JACADS during chemical weapons disposal operations.

The United States leads the world in disposing of chemical weapons. The Army began its mission of disposing of the entire U.S. stockpile of chemical weapons, with those located on a small island in the middle of the Pacific Ocean. Johnston Island is only a dot on the map. Though tiny, it is the site of great moments and historic firsts in the history of U.S. chemical weapons stockpile destruction.

From the time JACADS was built in 1986, thousands of men and women have lived and worked less than a mile from the chemical weapons stockpile. These dedicated men and women helped the Army achieve its goal of safe disposal of the stockpile.

On Nov. 29, 2000, JACADS completed disposal of the Johnston Island chemical weapons stockpile, and in early 2001, JACADS became the first U.S. facility to officially enter closure. This was accomplished while protecting the workers and the environment.

Johnston Island is home to hundreds of species of birds and fish. Working with the U.S. Environmental Protection Agency (EPA) and the U.S. Fish and Wildlife Service, JACADS has protected the environment while disposing of the chemical weapons. In fact, according to independent surveys and studies, the fish and bird populations are prospering. The coral reef that is Johnston Atoll is one of the few thriving reef systems in the world.

In May 2003, after finishing processing the secondary waste, the last furnace at JACADS was shut down—another first for JACADS and the program.

JACADS activities on Johnston Atoll will end in late 2003.

Because each of the eight disposal sites in the continental U.S. eventually will go through closure, program personnel are paying close attention to JACADS to ensure that valuable experience and insight from that site is shared.

Under state permit and federal law, the Umatilla Chemical Agent Disposal Facility can't be used for any other purpose than disposing of Umatilla's chemical weapons. The building where the weapons will be incinerated, the Munitions Demilitarization Building (MDB), must be destroyed once disposal is completed. Although the MDB must be demolished, the permit allows for the site's other buildings and facilities to be saved if the community Local Reuse Authority identifies a use for any of the structures and applies for a permit modification.

The year 2003 is also a year of firsts for several other U.S. stockpile sites. Incorporating lessons learned from handling and disposing of chemical agent at JACADS and the Tooele Chemical Agent Disposal Facility in Utah, the Aberdeen Chemical Agent Disposal Facility in Maryland and the Anniston Chemical Agent Disposal Facility in Alabama both started agent disposal operations, and the Tooele Chemical Agent Disposal Facility, which started operations in 1996, completed its agent changeover and started its disposal campaign for nerve agent VX.

Also in 2003, the Army completed construction of a neutralization facility for bulk agent stored at the Newport Chemical Depot in Indiana while responsibility for full-scale pilot testing of neutralization technologies to destroy the assembled

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U.S. Chemical Weapons Disposal

Since beginning chemical weapons disposal plans, the U.S. has eliminated more than 26 percent of its total chemical agent stockpile by weight and more than 39 percent by munitions count.

Chemical Materials Agency

Aberdeen Chemical Agent Disposal Facility, Md. – Neutralization operations began April 23, 2003. So far, workers have drained 90 bulk mustard agent containers, neutralized more than 152,000 pounds of agent and shipped 435,600 gallons of the neutralization byproduct, called hydrolysate, to the DuPont Secure Environmental Treatment facility in Deepwater, N.J., for biotreatment.

Anniston Chemical Agent Disposal Facility, Ala. – Disposal operations began Aug. 8, 2003. Currently, more than 45,700 gallons of GB nerve agent and 4,700 individual munitions have been destroyed. Agent trial burns in the liquid incinerator and the deactivation furnace are planned for November 2003.

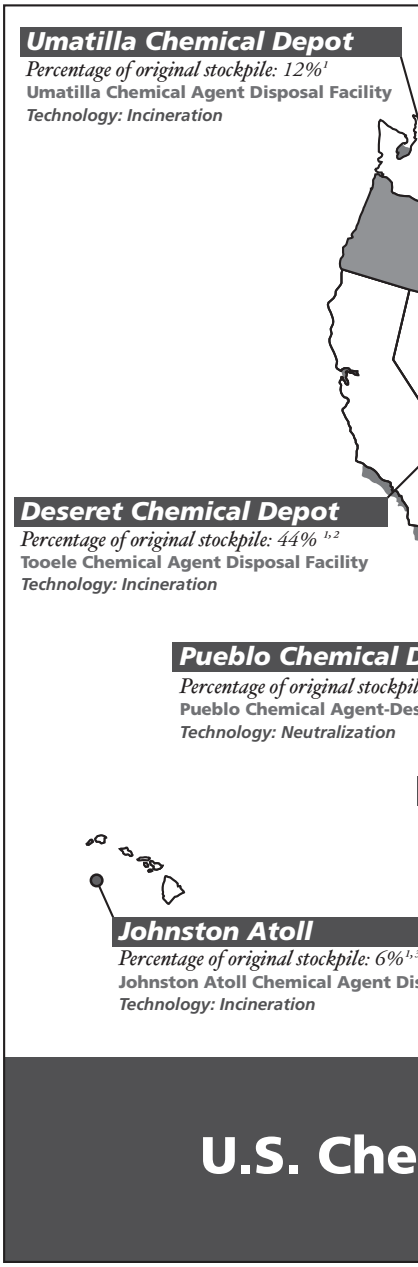
Johnston Atoll Chemical Agent Disposal System, Johnston Island – All chemical weapons stored on Johnston Island – more than 4,000,000 pounds of chemical agent and 412,000 individual munitions – were destroyed by Nov. 29, 2000. Closure and dismantling of the disposal facility began in January 2001. The closure workforce will be down to 24 personnel by the end of October 2003. Official closure (approval received from EPA) is expected to occur in 2004.

Newport Chemical Agent Disposal Facility, Ind. – Facility construction was completed in 2003. Newport is currently testing the facility and equipment. Disposal operations utilizing neutralization technology should start in 2004.

Pine Bluff Chemical Agent Disposal Facility, Ark. – Disposal facility and equipment testing began in 2003. As part of the testing process, the facility has started surrogate trial burns, using materials harder to destroy than actual agent, to prove the facility can meet the permitted destruction rates and efficiencies prior to entering into actual agent disposal. Agent disposal is expected to start in mid-2004. Site personnel currently have worked over 584 days without a lost workday injury.

Tooele Chemical Agent Disposal Facility, Utah – Agent disposal started Aug. 22, 1996. The entire Deseret Chemical Depot stockpile of nerve agent GB munitions has been destroyed. Now the stockpile of nerve agent VX munitions is being destroyed. Workers have destroyed more than 12,150,000 pounds of nerve agent and 935,700 individual munitions.

Umatilla Chemical Agent Disposal Facility, Ore. – The facility currently is performing testing and surrogate trial burns. The facility should start agent disposal in mid-2004.

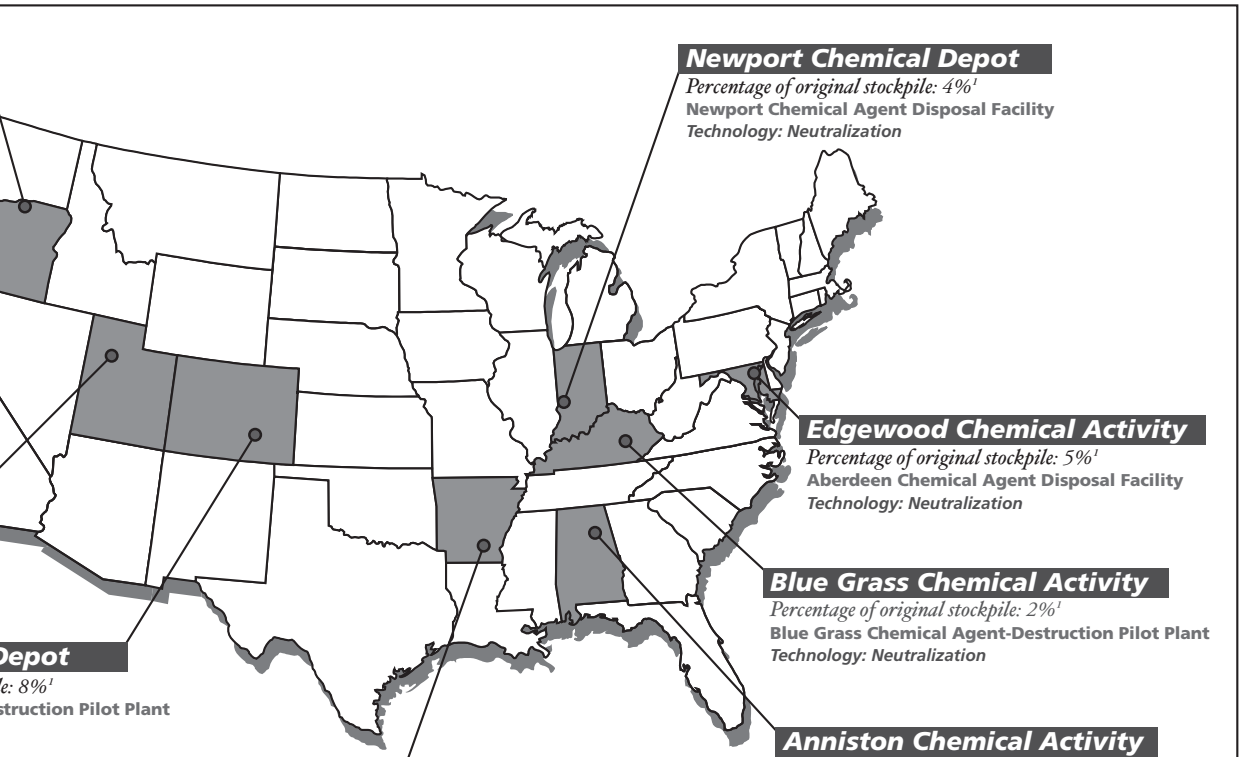


Programs Progress Update *(as of October 2003)*

Assembled Chemical Weapons Alternatives

Blue Grass Chemical Agent-Destruction Pilot Plant, Ky. – Neutralization followed by supercritical water oxidation will be used to destroy the chemical weapons stockpile. A contract for the design, construction, pilot testing, operation and closure of the facility was awarded in June 2003. A newly-formed Chemical Destruction Community Advisory Board will involve diverse community members in major issues associated with the plant, which is in the design phase.

Pueblo Chemical Agent-Destruction Pilot Plant, Colo. – In Colorado, neutralization followed by biotreatment will be used to destroy the chemical weapons stockpile. A contract for the design, construction, pilot testing, operations, and closure of the facility was awarded in 2002. The plant is currently in the design phase.



Newport Chemical Depot
Percentage of original stockpile: 4%[1]
Newport Chemical Agent Disposal Facility
Technology: Neutralization

Edgewood Chemical Activity
Percentage of original stockpile: 5%[1]
Aberdeen Chemical Agent Disposal Facility
Technology: Neutralization

Blue Grass Chemical Activity
Percentage of original stockpile: 2%[1]
Blue Grass Chemical Agent-Destruction Pilot Plant
Technology: Neutralization

Anniston Chemical Activity
Percentage of original stockpile: 7%[1]
Anniston Chemical Agent Disposal Facility
Technology: Incineration

Pine Bluff Chemical Activity
Percentage of original stockpile: 12%[1]
Pine Bluff Chemical Agent Disposal Facility
Technology: Incineration

Depot
e: 8%[1]
struction Pilot Plant

sposal System

KEY
Storage Site
Facility that will destroy the stockpile
Technology used for disposal
[1] *Approximate percentage of U.S. stockpile*
[2] ***44% of the Tooele stockpile has been destroyed, as of October 2003***
[3] ***100% of the JACADS stockpile has been destroyed***

10/03

mical Agent and Munitions Stockpiles

End of the Beginning

Continued from page 1

Photo by H. Ward Maynard

Taking down the JACADS facility.

chemical weapons stockpiles at Pueblo Chemical Depot in Colorado and Blue Grass Army Depot in Kentucky was designated to the Department of Defense's Assembled Chemical Weapons Alternatives Program.

As 2003 closes out, all eight remaining chemical weapons stockpile sites are either in disposal operations, preparing to start operations or preparing to start construction of disposal facilities.

The experiences at operating sites are being used to improve the processes and facilities at the other sites as they prepare to come on-line. The Army constantly strives to update their proven safe disposal methods through research, new technology and the experiences of each disposal site. Working with agencies such as the EPA and the National Research Council, the Army ensures that the community and the environment are protected.

This year, 2003, has been a banner year for the Army's chemical weapons disposal program. The firsts have been many, and with JACADS completing closure, the beginning of U.S. chemical weapons disposal has truly come to an end.

WELL DONE!

The Army constantly strives to update their proven safe disposal methods through research, new technology and the experiences of each disposal site.

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